

Notice of Allowability

Application No.

10/026,063

Examiner

Philip C Tucker

Applicant(s)

BALLARD ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment of 10/6/04.
2. ☒ The allowed claim(s) is/are 7-18 and 41-49.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Philip C Tucker
Primary Examiner
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michele Replogle on 10/15/04.

The application has been amended as follows:

1-6. (Canceled)

7. (Previously Presented): A process comprising:
adding peroxide degradable polymers to a wellbore fluid;
adding a peroxide source to a wellbore fluid;
pumping said wellbore fluids into the wellbore;
changing the pH of the fluid in the wellbore using a substantial portion of fluids produced from subterranean formations so as to activate the peroxide source;
wherein an inorganic peroxide source is encapsulated; and
wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value greater than about 7.5.

8. (Original): The process of Claim 7 wherein the encapsulating material comprises a film-forming polymer.

9. (Original): The process of Claim 8 wherein the film-forming polymer comprises an enteric polymer.

10. (Original): The process of Claim 9 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.

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11. (Original): The process of Claim 9 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.

12. (Original): A process for degrading polysaccharide polymers contained in a filter-cake located in functional proximity to the surface of a subterranean rock formation penetrated by a well, the process comprising:

suspending a metal peroxide in a polysaccharide-containing wellbore fluid, wherein the wellbore fluid has a pH value greater than about 7.5,

pumping the wellbore fluid into the well,

allowing some filtration of the fluid into a subterranean rock formation to produce a filter cake, wherein the filter cake contains the alkaline earth metal or zinc peroxide, polysaccharides, and any materials that may have been suspended in the wellbore fluid, bringing the well into production of a subterranean rock formation fluid, wherein the formation fluid exhibits a pH of less than about 7.0,

allowing the formation fluids to contact the filter cake so as to lower the pH value of the filter cake, and

allowing the metal peroxide in the filter cake to activate at the lower pH and degrade the polysaccharide components, thereby causing the filter cake to weaken and/or increase in permeability, so as to increase production rates.

13. (Original): The process of Claim 12 wherein the metal peroxide is encapsulated.

14. (Original): The process of Claim 13 wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value of at least about 7.5.

15. (Original): The process of Claim 14 wherein the encapsulating material comprises a film-forming polymer.

16. (Original): The process of Claim 15 wherein the film-forming polymer comprises an enteric polymer.

17. (Original): The process of Claim 16 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.

18. (Original): The process of Claim 16 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.

19-20. (Canceled).

21-25. (Canceled)

26-28. (Canceled)

29-30. (Canceled)

31-40. (Canceled)

41. (Previously presented): A method of using a change in the pH value of a down hole environment to control the release of peroxide in said down hole environment using produced fluids to effect said change in pH value, wherein the peroxide comprises an encapsulated peroxide source,

wherein the encapsulating material is substantially insoluble in wellbore fluids having a pH value greater than about 7.5.

42. (Original): The method of Claim 41 wherein the encapsulating material comprises a polymer.
43. (Original): The method of Claim 42 wherein the polymer comprises a film-forming polymer.
44. (Original): The method of Claim 43 wherein the film-forming polymer comprises an enteric polymer.
45. (Original): The method of Claim 44 wherein the enteric polymer comprises a copolymer of acrylic acid compounds and acrylate compounds.
46. (Original): The method of Claim 44 wherein the enteric polymer comprises a copolymer of a mixture of monomers selected from acrylic acid, acrylamide, methacrylic acid, ethylacrylate, methyl methacrylate, and combinations thereof.
47. (Original): The method of Claim 44 wherein the encapsulated peroxide source comprises an inorganic peroxide source.
48. (Original): The method of Claim 47 wherein the inorganic peroxide source is selected from a zinc peroxide, alkaline earth metal peroxides, and combinations thereof.
49. (Original): The method of Claim 48 wherein the alkaline earth metal peroxide comprises magnesium peroxide.


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The amendment is made to correct the streaks which occurred upon faxing of the original document.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Tucker whose telephone number is 571-272-1095. The examiner can normally be reached on Monday - Friday, Flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip C Tucker
Primary Examiner
Art Unit 1712

PCT-3145